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The Beginnings of Dismantling

WILLIAM K. S. WANG

The Second of Two Parts

Answers to Possible Objections to the Dismantled System

There are many possible objections to the unbundled system previously described, and this article will attempt brief answers to a few of them.

Some people may fear that a few credential agencies would become too powerful and effectively dictate educational policy throughout the free world. For several reasons, this is highly improbable. There are only limited benefits to size in the business of grading essay examinations. An agency which graded essay tests would have to double its staff to double its business. Moreover, it does not seem beyond the capacity of an employer to become familiar with a wide variety of credential agencies—all of which would be honest, reliable, and consistent but each with a different educational viewpoint—just as our society is now able to receive graduates of hundreds, if not thousands, of colleges. It would not even be surprising if firms appeared which specialized in evaluating and comparing credential agencies, thereby enabling relatively small credential agencies to prosper. Because students could take tests in different nations with relative ease and because multi-national credential agencies might open branches in many countries, higher education in many nations might actually become less oligopolistic and elitist.

Centralization of power in the video disc and cassette publishing industry also seems improbable. Since any entrepreneur could produce and distribute a taped lecture or lecture series without a prohibitive capital outlay, one would expect that this subindustry would be almost

as decentralized and diverse as the present-day international book publishing, record, or film industries (underground and above ground). The brisk competition between video publishers of different nations would result in such an active international cultural cross-fertilization that it would be impossible for any one publisher to dominate the world of thoughts and ideas.

In the first part of this article, escape from rigid curriculum requirements was mentioned as an advantage of the new system. Some academics may feel that this increased freedom is not beneficial but harmful. Although this article has a libertarian bias, this is not the place for an extended discussion of paternalism versus libertarianism. Even in an unbundled educational world, individuals dissatisfied with the way the system operates could attempt to change its course by vigorously entering the market place of ideas with their own books, articles, cassettes, and reviews of books and cassettes. Some credential agencies also could grant special certificates for completion of certain rigidly defined curricula. Employers and others would undoubtedly come to their own conclusions about the worth of certain courses, so that there always would be social and economic pressure toward conformity, as well as students who resist this pressure.

Indeed, other critics may object that the restructured educational system places too much emphasis on credentials and the invidious discrimination of grades. Students might feel less, rather than more, freedom under the new system.

Some persons might criticize the unbundled educational system because it apparently does not encourage research, especially in the laboratory sciences. This is a problem, but the search for knowledge would not be stifled. Tutors and scriptwriters would be forced to do research to maintain or improve their teaching or writing skills. Conventional research journals would most likely still provide specialized media for disseminating current research and giving researchers the pleasure of seeing their work published. The federal government, private foundations, and corporations could increase their subsidy of

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pure research, and many private universities with substantial endowments could convert themselves into predominantly research institutes.

Possible Adaptations

To enhance the teaching and testing of research techniques, especially in the laboratory, the unbundled system

many studies yet made, we can find no evidence to dispute the conclusion that one-way television is as good as other college instructional media.”⁴

As mentioned later in this article, the College Level Examination Program (CLEP) of the College Entrance Examination Board allows students to demonstrate proficiency by examination in various subjects no matter

Some persons might criticize the dismantled educational system because it apparently does not encourage research

undoubtedly would make certain adaptations. Credential agencies would administer practical examinations; home experimental kits would be manufactured; and tutoring firms would give laboratory instruction, possibly in connection with audio-tape instruction.¹ In the end, if it proves impossible to unbundle certain forms of highly specialized instruction, this instruction could be rendered by approved tutors who would certify student achievement; but this should be exceptional.

There are, of course, other problems with unbundling which might be more intractable. Copyright violations might become difficult to police or prevent, and the impersonal nature of the credentialing system might conceivably encourage cheating.² Careful proctoring and vigilance could be used to deter dishonesty.

Concern for Quality

Ultimately, the most important concern is the quality of education produced by the unbundled system. Defenders of present university tying arrangements will undoubtedly assert that video tapes are not as effective as live professors. Empirical research demonstrates, however, that personal instruction at the college level is not necessarily superior to instructional television. In 1966, a review of 207 published studies comparing instructional television and conventional teaching indicated that there was probably no significant difference; sixty-three found television instruction to be superior; and fifty showed conventional instruction to be better.³ After analyzing the actual data contained in forty-two comparative studies in which a total of 348 comparisons of final examination results had been made, two experts commented: “The conclusions of our comparative analysis are unequivocal. . . . In the most intensive analysis across

how this knowledge was acquired. A number of studies have compared regular university students who earn some credit through CLEP examinations with students who take no CLEP examinations. After reviewing these studies, three commentators (Ewald Nyquist, Jack Arbolino, and Gene Hawes) conclude:

. . . . external learning that is properly validated by examinations appears to be just as effective for intellectual development as learning done in regular course attendance. People who have thus learned externally, in crucial comparisons with fellow students who are also actually in college, apparently have learned effectively because they get higher course marks in general than their fellow students. And crucial analyses of later conventional course work by such external learners indicates the effectiveness of their external learning because they also generally get better marks in that advanced course work than their fellow students who have learned only in conventional course attendance.⁵

Empirical research even questions the superiority of lecture and/or discussion over independent study. A major investigation in 1968 pooled the data from a large number of studies conducted between 1924 and 1965 on the relationship between achievement and instructional arrangements. The study showed that there was no discernible difference between lecture and discussion, between lecture and lecture-discussion, between supervised independent study and face-to-face instruction, between supervised independent study and lecture, between supervised independent study and discussion, between supervised independent study and lecture-discussion, between supervised and unsupervised independent study, and even *between unsupervised independent study and face-to-face instruction*. Under the subtitle “In a Word—Nothing,” the authors conclude: “These data demonstrate clearly

and unequivocally that there is no measurable difference among truly distinctive methods of college instruction when evaluated by student performance on final examinations.”⁶

Several large-scale studies not included in the above pooling analysis have generated similar conclusions. Experiments at Antioch College and the University of Colorado showed that drastic reductions in class time had no adverse effect on content understanding. A study at Miami University in Ohio, using classes of different sizes, compared three educational formats with many variations—television, lecture, and discussion—and found no significant differences among any of the groups taught by different methods.

In the words of one leading commentator, Ohmer Milton:

Consistently, . . . such variables as class size, frequency of class meetings, and manner of presentation [including independent study], when considered in isolation, have been demonstrated to wield no major impact upon learning as measured by the usual tests. Even when some of these variables have been combined, their influence appears to be quite minimal. . . .

Because of the consistency of the results in different institutions of higher learning—for example selective and non-selective ones—and the disciplines in and among them, a far-reaching conclusion, and one which undoubtedly is disturbing to many faculty members and students, can be drawn about the

The Beginnings of Unbundling

Although American universities remain largely traditional, there are many new developments in post-secondary learning which either contribute toward unbundling or actually involve partial or complete unbundling. Describing the numerous changes is beyond the scope of this article, which will just classify the different types of innovations and give a few illustrations.⁸

Innovations in Non-Collegiate Information Impartation

Individuals have always had the option of learning on their own through books. Now they have additional alternatives, such as educational radio, television, and video-cassettes or discs.

Tutoring services are also developing. In Chicago, there is a “Learning Exchange” which matches tutors and learners. When a person telephones the Exchange and expresses interest in learning a certain subject, he is given the names, backgrounds, and telephone numbers of those who have registered to teach that subject. If no teacher is available, the student’s name is kept on file until a tutor registers.⁹ New York State has a similar program run by the central New York Regional Learning Service, established by a grant from the United States Office of Education. One of the Regional Learning Service’s programs is a regional instructional reserve which maintains a computerized list of all local people qualified (in the judgment of

In Chicago there is a “Learning Exchange” which matches tutors and learners.

teaching of subject matter content: *If the content of a discipline can be defined as a body of information and concepts, the way or ways in which ideas or concepts are organized, and the methods by which knowledge is sought, and if it is acceded that class examinations measure content primarily—there being no research evidence to the contrary—then the explanations of such content by the instructor in the classroom, by whatever method, contribute little to the learnings of content.*⁷

In summary, the possible objections to the unbundled system are not persuasive. In light of the research on learning, the case for unbundling is overpowering. Students should at least be given the option of purchasing less expensive media of instruction free from the restraints of anti-competitive educational tying arrangements.

academic panels) to serve as tutors in different subjects.¹⁰

Developments such as these contribute to unbundling because they provide the alternative services which, in an unbundled system, could be used by students in lieu of information impartation offered by traditional colleges.

University Extension Non-Degree Programs without Classrooms

The non-degree programs of many university extension schools approach the flexibility of learning exchanges, with courses taught by local experts in a dazzling array of subjects from cooking to science fiction. University extension programs also offer non-degree courses with no classroom component. Among the most innovative schools has been the University of California Extension, which in 1973

offered extension credit for two separate introductory psychology courses developed by the magazine, *Psychology Today*. One course had an independent study format with programmed study manuals, a textbook, long-playing records, self-check quizzes, and computer-scored examinations. The other course consisted of eighteen half-hour television programs shown on non-commercial television, supplemented by a textbook, a study guide, a film guide, records, self-tests, and a series of computer-scored examinations.¹¹

An ongoing program is Courses by Newspaper, which is funded by the National Endowment for the Humanities and administered by the University of California, San Diego, Extension. The first course, "America and the Future of Man," started in newspapers all over the country in October, 1973;¹² and the thirteenth course, "American Families in Transition," will start in fall 1980. Participating newspapers throughout the nation publish "lectures" by professors at different universities, and the University of California Extension provides supplementary reading material. (Some universities even provide degree credit for courses based on the newspaper lectures. From programs such as these, it is a small step to degree credit for instruction without classrooms and eventually to degree credit for independent study.

University Degree Classroom Instruction Using Material Produced outside the University

Many universities use video-tapes of their own professors. Some now use televised courses produced by third parties, often other colleges and universities. Some schools produce expensive video-courses costing up to one million dollars and recoup expenses by leasing the product to other schools. As of June 1978, Coastline Community College, in southern California, had sold or leased series to 320 other schools.¹³ Another prolific source of video (and radio) courses is the University of Mid-America, which with the support of the National Institute of Education, develops multi-media courses for sale or lease to other schools.¹⁴ In spring 1979, as many as forty-five courses were offered, including one on Japan with extensive local footage produced with the assistance of Harvard Professor Edwin O. Reischauer, who commented: "These programs offer an understanding of Japan and its history and culture which would otherwise take years of study and residence in Japan to acquire."¹⁵

Even law schools have not escaped telecourses. Seton Hall Law School was awarded a grant in 1973 by the Exxon Foundation and the Department of Health, Education and Welfare to produce and distribute a complete video cassette law course on "Women and the Law." During the fall semester of 1979, McGeorge Law School in California offered a televised course in communications law which consisted of video-cassettes of lectures by Morton I. Hamburg, a practicing attorney in New York and an adjunct professor at New York University Law School,

and by other practitioners in the field, including Kenneth Cox, a former member of the Federal Communications Commission, and James C. Goodale, vice chairman of the *New York Times*. After each of the 90 minute pre-taped sessions, Mr. Hamburg was televised live from New York by satellite, so that he could interact with the students in the class at McGeorge. Transmission from the classroom to New York was audio only, but the students could answer his questions and ask him questions as well. In addition, Mr. Hamburg was available by telephone through a toll-free number.¹⁶

The Wall Street Journal reported in July 1980 that the communications schools of the University of Southern California and University of Pennsylvania together plan to grant \$10 million a year of surplus endowment income to the Corporation for Public Broadcasting to create college courses. This decision was made at the urging of Walter Annenberg, who endowed both communications schools.¹⁷

A school's use of video-courses produced by outsiders is technically not unbundling because the college still chooses the televised material. Nevertheless, this neo-bundling is (1) a worthwhile innovation which increases student options and (2) a major step towards total unbundling (in which the student has a wide choice of impartation material).

University Degree Instruction without Classrooms (The Open University)

The prototype for college education without classrooms is Britain's Open University, which offers students an opportunity to earn a college degree while continuing to work. The Open University employs a variety of techniques and technologies, including television, radio, brief summer school sessions, and centers replete with tutors and counselors.¹⁸ The number of American counterparts to Britain's Open University has been growing.

Financed in part by a \$400,000 grant from the Carnegie Corporation, the National University Consortium started an open university system in the United States in fall 1980. The consortium began with the participation of seven colleges and universities and plans to add more later. Each student buys a study package, is assigned a tutor, and receives a schedule of programs broadcast by a local television station.¹⁹

An open university is like a top-quality correspondence school, with the addition of televised courses, tutors, and other media. Initially, this elimination of classroom instruction is worthwhile neo-bundling, but not unbundling itself. If numerous open universities evolved, however, the lack of classrooms would enable students to choose a few courses from each open university, an unbundling of *courses*. In addition, competition might eventually result in each open university's partly or completely unbundling its *services* (offering students the option of purchasing fewer services, such as just books and examinations, or even examinations only).

University Degree Credit, with No Required Purchase of Instruction (The External Degree)

The ultimate stage in the unbundling process is the granting of degree credit based on examinations only, with no requirement to buy any instruction. In the U.S., credentialing is now being offered as a separate function. Students who participate in the College Level Examination Program (CLEP) of the College Entrance Examination

Task Force and Commission Recommendations

These developments have received the encouragement of several groups that have studied contemporary higher education. The Carnegie Commission on Higher Education has recommended "that state and federal government agencies, as well as private foundations, expand programs of support for the development of external degree systems and open universities . . ." ²⁷ and has urged "the

The ultimate stage . . . is the granting of degree credit based on examinations only, with no requirements to buy any instruction.

tion Board are able to demonstrate their college-level proficiency by examination on various subjects no matter when, where, or how this knowledge was acquired.²⁰ The Board of Regents of the University of the State of New York²¹ and the Board of Higher Education of the State of New Jersey (through Thomas A. Edison College)²² have both established so-called external degree-granting programs²³ based on CLEP tests, United States Armed Forces Institute examinations, and the New York-New Jersey program's own college proficiency examinations. Both the New York program and Thomas A. Edison College have no campus, classrooms, laboratories, or libraries. Other state universities, including those of Oklahoma, Massachusetts, Minnesota, Florida, Vermont, California, and Hawaii, are experimenting with various types of less extreme external degree programs.²⁴

Hybrid Developments in Credentialing

Two hybrid developments in credentialing are contract learning and credit for experience. In contract learning, a tutor and student agree on an independent course of study for the student. If the student satisfactorily performs his contract, he will receive a specified number of credits.

Both types of credentialing are offered by the University without Walls, a degree-granting consortium of roughly thirty colleges²⁵ and Empire State College, part of the State University of New York.²⁶ Graduate schools and employers will have to decide whether these and other programs of contract learning and credit for experience provide sufficiently accurate credentialing.

development and utilization of outstanding instructional programs and materials for use with new educational hardware."²⁸ The Commission hopes that by the year 2000 there will be widespread "availability of education through independent study both within and without traditional institutions . . . through applications of the expanding technology."²⁹

The Commission on Non-Traditional Study has made similar recommendations:

Degrees should sometimes be awarded wholly by examination if two conditions are met: the institution concerned is an established and reputable educational authority; and valid and reliable examinations are available to test the attainment of the degree's objectives.

. . . In exceptional cases, under conditions which are carefully controlled by quality standards, degrees should be awarded by nonteaching institutions. . . .³⁰

The 1971 Assembly of the American Academy of Arts and Sciences on University Goals and Governance, also advocated the establishment of national and institutional examinations to enable students to receive credit for knowledge acquired through experience and independent study.

In 1977, a task force of the American Council on Education examined the area of credentialing educational accomplishment. Although the task force believed that credentialing should be done by traditional universities and colleges,³¹ it did advocate that these institutions should "permit students to demonstrate accomplishment without reference to time-bound and campus-bound instruction and learning."³² The task force also urged faculties to formulate "policy for accepting the results of

nationally validated examinations or other procedures for establishing credit equivalencies.”³³

The general concept that universities offer their functions as separate services also has been endorsed by the federal government. A task force concerned with higher education and commissioned by the Department of Health, Education, and Welfare recommended in 1971:

We believe it is time for a different approach to making higher education more available and more stimulating to those people unable to attend a college full-time. . . . We propose that the resources for education provided as a package by the college (formal instruction, reading, libraries, examinations, degrees, etc.) be provided to the community as separate services in order that individuals and groups can find their own way to an education.

We believe that there are literally millions who can benefit from new approaches to an education. . . .

If separate organizations are established that provide the traditional functions of the college directly to the community, individuals can fashion and legitimize their own programs. . . .

While at first glance the functions of a college seem inseparable, closer examination would indicate that their separation is not only possible, but would have advantages.³⁴

Changes are needed in the existing university system in order to make higher education available to students of modest economic means. The foregoing material indicates an increasing recognition of the advantages of unbundling.

Concluding Comments

The slow evolution toward unbundling has already begun. As just mentioned, there are already several external degree programs which offer credentialing with little or no tied impartation. The nation is becoming increasingly receptive to public television and national testing services. Already, many individuals give such tests as the Graduate Record Examination, the Scholastic Aptitude Test, and the Law School Aptitude Test more weight than grade point averages or transcripts.

While the evolutionary process toward unbundled education has begun, traditional colleges will undoubtedly be resistant to change. However, pressure from several sources may overcome this resistance. There is increasing pressure on American society to provide a college education to all those who want it, while at the same time the financial cost to society of providing a university education is rising. Total revenues of American universities are currently about \$45 billion a year.

Unbundling of higher education along functional lines offers the hope of increasing the quality of lectures, making available more individual instruction, changing education into a process continuing throughout life, and offering students remarkable freedom of choice as to courses, schedules, work-pace, and place of residence. Most importantly, this improved education could be provided to many

more individuals throughout the world at much lower cost and without government subsidies to those providing education services.

NOTES

1. Britain's Open University uses an ingenious home experimental kit in its science courses. Walsh, "The Open University: Breakthrough for Britain?" *Science* 174 (1971): 675-676.
2. See "An Epidemic of Cheating," *Newsweek* May 26, 1980, p. 63; Seib, "Why Are They Cheating?" *The Wall Street Journal*, June 10, 1980, p. 20.
3. Godwin C. Chu and W. Schramm, *Learning from Television: What the Research Says* (Washington, D.C.: Telecomm, National Association of Educational Broadcasters, 1967), p. 100.
4. R. Dubin and R. Hedley, *The Medium May be Related to the Message—College Instruction by TV* (1969): pp. 1-2.
5. E. Nyquist, J. Arbolino, and G. Hawes, *College Learning—Anytime, Anywhere* (New York: Harcourt Brace Jovanovich, 1977), pp. 154-57.
6. R. Dubin and T. Taveggia, *The Teaching-Learning Paradox—A Comparative Analysis of College Teaching Methods* (1968): p. 35.
7. Ohmer Milton, *Alternatives to the Traditional* (San Francisco: Jossey-Bass, 1972) pp. 23-24, (emphasis added).
8. For a general discussion of recent developments in non-traditional higher education (especially for adults), see R. Gross, *The Lifelong Learner* (New York: Simon and Schuster, 1977); R. Gross, "New Paths to Learning: College Education for Adults" (Public Affairs Pamphlet, 381 Park Ave. S., New York, N.Y. 10016, 1977).
9. Brown, "In Chicago, It's Easy to Find Someone to Teach Lion Taming or Anything Else," *Wall Street Journal*, April 10, 1973, p. 14.
10. C. Houle, *The External Degree* (San Francisco: Jossey-Bass, 1973) p. 117. (Hereafter cited as C. Houle.)
11. *Psychology Today*, October 1973, p. 75.
12. C. Houle, 183; *Time*, January 21, 1974, p. 53.
13. "Telecourses," *Newsweek*, June 5, 1978, p. 94.
14. Gross, "Open Learning in the Open Spaces," *American Education*, April 1979, p. 6.
15. *Ibid*, p. 10.
16. Brown, "N.Y.U. Law Professor to Teach on Coast via TV," *The New York Times*, Wednesday, September 5, 1979, p. 22.
17. "Walter Annenberg's 'University of the Air' Hurdles a Possible Tax Barrier," *The Wall Street Journal*, July 23, 1980, p. 1.
18. W. Perry, *The Open University: History and Evaluation of a Dynamic Innovation in Higher Education* (San Francisco: Jossey-Bass, 1977). Carnegie Commission on Higher Education, *New Students and New Places—Policies for the Future Growth and Development of American Higher Education* (1971): 112-13; C. Houle 34-38.
19. "Open Colleges to Be Tested," *New York Times*, May 6, 1980, p. C-1.
20. C. Houle, 75-76, 97-100, 117-18; Sharon, "College Credit for Off-Campus Study" (1971): 13-14, Bethesda, Maryland, ERIC Document Reproduction Service ED 048 520.
21. University of the State of New York, "The Regents External Degree—Handbook of Information for Candidates," 1971. See also C. Houle, 94-97.
22. Thomas A. Edison College, "1973-74 Bulletin: The External Degree Program of the State of New Jersey"; "College of Life," *Newsweek*, July 11, 1977, p. 54.
23. The term "external degree" has a vague definition. Houle defines an external degree as "one awarded to an individual on the basis of some program of preparation (devised either by himself or by an educational institution) which is not centered on traditional patterns of residential collegiate or university study." C. Houle, 14-15. The New York and New Jersey programs are examples of the most extreme form of the external degree program, which allows the student to prepare for examinations in any manner he sees fit. See authorities cited in notes 21 and 22 *supra*. For an excellent bibliography of the literature on external degrees, see C. Houle at 187-208.

24. Carnegie Commission on Higher Education, *The Campus and the City—Maximizing Assets and Reducing Liabilities* (1972): 55-57; Carnegie Commission on Higher Education, *New Students and New Places—Policies for the Future Growth and Development of American Higher Education* (1971): 114-15; C. Houle, 100-11, 176-77.

25. R. Gross, *supra* note 8, pp. 7-9; Carnegie Commission on Higher Education, *The Campus and the City—Maximizing Assets and Reducing Liabilities* (1972): 57-58; C. Houle, 111-16; *Time*, Aug. 28, 1972, pp. 40-42; Ehrich, "Off-Campus U," *Wall Street Journal*, Feb. 2, 1972, p. 1.

26. R. Gross, *supra* note 8, pp. 9-11; C. Houle, 97-100.

27. Carnegie Commission on Higher Education, *New Students and New Places—Policies for the Future Growth and Development of American Higher Education* (1971): 117. Similar recommendations are made in the following studies: Carnegie Commission on

Higher Education, *Less Time, More Options—Education Beyond the High School* (1971): 20; *The Fourth Revolution* 51-53, 91-94.

28. *The Fourth Revolution* 48.

29. *Ibid.*, p. 93.

30. Commission on Non-Traditional Study, *Diversity by Design* (1973): 131-3. The Commission on Non-Traditional Study was created in 1971 by the Carnegie Corporation, the College Entrance Examination Board, and the Educational Testing Service.

31. American Council on Education Task Force on Educational Credit and Credentials, *Recommendations on Credentialing Educational Accomplishment* (Washington, D.C.: ACE, 1978), 6-9.

32. *Ibid.*, p. 16.

33. *Ibid.*, p. 18.

34. F. Newman, *Report on Higher Education* (Washington, D.C.: HEW, 1971), 68-69.

Staff Review System

MARGARET E. UGUROGLU and MARY M. DWYER

Why Peer Review?

Much personnel research has been devoted to effective ways for supervisors to review employees. Few efforts have been undertaken in industry, schools, or the medical profession, to show peers how to evaluate peers.

In business, management by objectives is becoming more widely accepted and practiced. Although the supervisor and employee may sometimes jointly determine goals, plans for achieving these goals, and means of implementing them, final review of the employee rests solely on the supervisor's impression of how well the goals were achieved. Once this assessment is completed, the employer generally organizes efforts for remediation on the part of the employee before repeating the cycle of establishing goals and action plans. Most recently, Kearney (5) suggests using Behaviorally Anchored Rating Scales (BARS) mainly composed by the supervisor to remediate the employee's behavior during a probationary period. "Bars go beyond the typical MBO action planning of identifying activities (means) to achieve goals (ends) and specify within these activities the job-specific behaviors that are

known to result in more or less effective performance (goal achievement)." (5:23) While management by objectives attempts to improve the quality of communication and productivity levels, employee input often remains minimal within the process. Furthermore, peer review is generally non-existent.

In universities and colleges, faculty members generally receive an annual review by an administrator before receiving an additional contract. The administrator's method for arriving at a decision for contract renewal varies from informally relying on first impressions and hearsay to making a criterion-based judgment supplemented by feedback from other administrators. After a pre-determined number of years, faculty members undergo review for tenure. Tenure systems vary from institution to institution, and some universities operate under quota systems. Once a quota has been reached within an individual department, non-tenured faculty members, regardless of their efforts, must wait for turnover to occur. Further complicating the tenure system are the different criteria used by various institutions for granting tenure. At some institutions, the decision makers base their judgment on informal, round-table discussion of the quality of the employee's work. Other universities impose strong, rigid guidelines for submitting portfolios for review by a promotions committee. Since the ultimate decision is generally made by tenured colleagues, the point of view may be substantially different from

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